



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/442,568	11/18/1999	FRANK DIMEO JR.	401	6099

7590 02/14/2003

OLIVER A ZITZMANN  
ATMI INC  
7 COMMERCE DRIVE  
DANBURY, CT 06810

EXAMINER

PHAM, HOA Q

ART UNIT	PAPER NUMBER
----------	--------------

2877

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/442,568

Applicant(s)

DIMEO ET AL.

Examiner

Hoa Q. Pham

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-32, 35-45 and 63-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-32 and 35-45 is/are allowed.
- 6) ☒ Claim(s) 63-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 07 May 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The amendment filed 7/5/02 and 12/16/02 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Applicant's amendment to last page at line 16 (should be in page 18 line 23) (see amendment filed on 5/7/02) of the specification in which the limitations "optical filter 36 may comprise a rare earth metal thin film that is overlaid by a protective layer 37, which may in turn comprise a hydrogen-permeable material, such as Mg, Ca Al, Ir Ni, or Co, or a metal selected from the group consisting of palladium, platinum and iridium" is not supported by the original disclosure. It should be changed to --optical filter 36 may comprise a rare earth metal thin film that is overlaid by a protective layer 37, which may in turn comprise a hydrogen-permeable material **that is doped with a dopant** such as Mg, Ca, Al, Ir, Ni, or Co or a metal selected from the group consisting of palladium, platinum and iridium --. Also, see claims 42-43

Applicant is required to cancel the new matter in the reply to this Office Action.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2877

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 63-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (4,661,320) in view of Prieve et al (6,269,680).

Regarding claim 63, Ito et al (of record) discloses a light/heat source (5), detector (6) and an optical barrier (1) there between, wherein the optical barrier response to the presence of the hydrogen by responsively changing from a first optical state to a different second state to indicate the presence of hydrogen gas in the gaseous environment (figure 1 and column 3, line 64 through column 4 line 13). Ito teaches that the light source is a LED and does not explicitly teach a light/heat source. However, such a feature is known in the art as taught by Prieve et al. Prieve et al, from the same field of endeavor, discloses a method and apparatus for measuring concentration of hydrogen peroxide vapor in which the light/heat source (mercury lamp or deuterium lamp) is used. Those of ordinary skill in the art at the time the invention was made to replace the LED of Ito et al by a light/heat source taught by Prieve et al. The rationale for this modification would have arisen from the fact that any kind of light source could be used in the hydrogen gas detection system (see column 6 lines 1-4 of Prieve et al for suggestion).

Regarding claim 67, Ito et al teaches that protective film comprises a palladium film (column 3 lines 19-20).

Regarding claims 64-66 and 70, Prieve et al does not teach that the light source is an incandescent lamp or fluorescent lamp. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an

Art Unit: 2877

incandescent lamp or fluorescent lamp instead of a mercury lamp or deuterium lamp because they are function in the same manner. A substitution for each other is generally recognized as being within the level of ordinary skill in the art.

Regarding claims 68 and 69; the roughing method such as mechanical roughing, chemical roughing, etc... are well known in the art, thus it would have been obvious to use such a roughing method for forming an optical filter as now claimed in claims 68 and 69.

***Allowable Subject Matter***

4. Claims 30-32 and 35-45 are allowed.

***Response to Arguments***

5. Applicant's arguments with respect to claims 63-70 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers

Art Unit: 2877

for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Hoa Q. Pham', with a stylized, cursive script.

Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

HP  
February 11, 2003